

REMARKS/ARGUMENTS

Claims 13-14 and 16-27 are pending in this application. By this Amendment, the specification and claims 13, 14, 17, 21, 22 and 25 are amended, and claim 15 is cancelled without prejudice or disclaimer. The specification has been amended to correct typographical errors, and contains no new matter. Support for the claims can be found throughout the specification, including the original claims, and the drawings. Allowance in view of the above amendments and the following remarks is respectfully requested.

The Office Action rejects claims 13-17 and 21-25 under 35 U.S.C. §102(b) as being anticipated by Okumura et al., U.S. Patent No. 4,914,808 (hereinafter "Okumura"). Claim 15 is cancelled, and therefore the rejection is moot with respect to claim 15. The rejection, in so far as it applies to claims 13-14, 16-17, and 21-25, is respectfully traversed.

Independent claim 13 recites, *inter alia*, picking up a plurality of electrical components substantially simultaneously with a corresponding plurality of suction nozzles, and moving the plurality of suction nozzles simultaneously with respect to each other to substantially simultaneously mount the electrical components on the PCB. Okumura neither discloses nor suggests such features.

The parts feeding unit taught by Okumura includes a series of reels 3 wound with tapes 2 of electronic parts 1 positioned at regular intervals along a tape moving table 5 which moves in the x direction to collectively form a parts feeding means. A plurality of suction nozzles 6 are

sequentially positioned along the circumference of a turntable T, and as the turntable T rotates, a single electronic part 1 is conveyed to each suction nozzle 6 in sequence from the tape 2 through a conveyor unit 4. As the turntable T rotates, an electronic part 1 now loaded on a first suction nozzle 6 is positioned over a positioning unit 7 to check alignment prior to further rotation of the turntable T and subsequent mounting on a PCB 11. While the first nozzle 6 is positioned over the positioning unit 7, a second nozzle 6 (i.e., the next nozzle) is positioned so as to pick up an electronic part 1 from the conveying unit 4. When the positioning unit 7 determines that the first suction nozzle 6 and corresponding electronic part 1 is properly positioned, the turntable T is further rotated, positioning the first suction nozzle 6 over the PCB 11 for a parts mounting operation, the second suction nozzle 6 over the positioning unit 7 for alignment check, and a third suction nozzle 6 in line with the conveying unit 4 to pick up an electronic part 1. The tape moving table 5 moves in the x direction to allow the appropriate tape 2 of electronic parts to be aligned with the appropriate suction nozzle 6 in the sequence.

While Okumura does teach a plurality of suction nozzles 6, Okumura's suction nozzles 6 are arranged in a circular sequential fashion along the circumference of the turntable T. Further, due to this construction, the pickup, movement, alignment, and mounting of individual electronic parts 1 carried out through the rotation of the turntable T is, in turn, carried out in a sequential fashion, as described above, and electronic parts 1 are mounted one at a time.

Moreover, because the suction nozzles are mounted on the turntable, the suction nozzles never move in the X and Y directions with respect to each other.

In contrast, the claimed method significantly improves productivity and throughput, in that a plurality of suction nozzles substantially simultaneously pick up a plurality of electronic parts, the plurality of suction nozzles are simultaneously moved, and then the plurality of electronic parts are substantially simultaneously mounted on a PCB. Okamura neither discloses nor suggests such steps.

Accordingly, it is respectfully submitted that independent claim 13 is not anticipated by Okumura, and thus the rejection of independent claim 13 under 35 U.S.C. §102(b) over Okumura should be withdrawn. Dependent claims 14 and 16-17 are allowable at least for the reasons discussed above with respect to independent claim 13, from which they depend, as well as for their added features.

Independent claim 21 recites, *inter alia*, moving the plurality of suction nozzles with respect to the PCB and with respect to each other in at least one of an X and a Y direction to substantially simultaneously mount the plurality of electrical components on the PCB. As explained above, Okumura neither discloses nor suggests such features. More specifically, as set forth above, the parts feeding unit taught by Okumura is only capable of sequential operation, and clearly does not disclose or suggest simultaneously mounting a plurality of

electrical components on a PCB, nor moving the suction nozzles in either the X or Y directions with respect to each other.

Accordingly, it is respectfully submitted that independent claim 21 is not anticipated by Okumura, and thus the rejection of independent claim 21 under 35 U.S.C. §102(b) over Okumura should be withdrawn. Dependent claims 22-25 are allowable at least for the reasons discussed above with respect to independent claim 21, from which they depend, as well as for their added features.

In view of the foregoing, withdrawal of the rejection of claims 13, 14, 16, 17 and 21-25 is respectfully requested.

The Office Action rejects claims 18-20 and 26-27 under 35 U.S.C. §103(a) as being unpatentable over Okumura, in view of Baker, U.S. Patent No. 5,323,528. The rejection is respectfully traversed.

Dependent claims 18-20 and 26-27 are allowable over Okumura at least for the reasons discussed above with respect to independent claims 13 and 21, from which they respectively depend, as well as for their added features. Further, Baker is merely cited to teach the use of a conveyer, and thus fails to overcome the deficiencies of Okumura as discussed above.

Accordingly, it is respectfully submitted that dependent claims 18-20 and 26-27 are also allowable over the applied combination of prior art references, and thus the rejection of claims 18-20 and 26-27 under 35 U.S.C. §103(a) should be withdrawn.

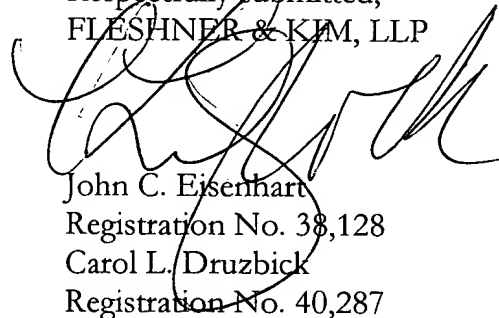
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Reply to Office Action of November 28, 2003

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In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, **Carol L. Druzbeck**, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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